Segregated nanofiller: Recent development in polymer-based composites and its applications

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ABSTRACT

An ordinary conductive polymer composite (CPCs) generally requires high amount of conductive filler at insulator to conductor transition, need complex processing and display poor mechanical properties. High value of the conductivity with outstanding mechanical properties can be achieved by segregated conductive polymer composite (s-CPCs) which somehow is still challenging and required more extensive research. To understand more on the formation and properties of the s-CPCs, this review briefly discussed on general information on the s-CPCs, the morphology in term of filler dispersion, the factors affecting the properties (e.g. types of polymer host, types of filler, concentration of the conductive filler), and the potential applications of s-CPC.

KEYWORDS

Segregated filler; Polymer composite; Conductive filler; Conductive polymer; Applications

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